

MR3287-12

Serial No. 10/773,399

Response to Office Action dated 4 August 2004

AMENDMENTS TO THE SPECIFICATION

I. Please replace the title on page 1, line 1, with the following amended title:

SCREW WITH CUTTING EDGES

II. Please replace the paragraph beginning at page 3, lines 4 to 12, with the following amended paragraph:

For archiving the object, the present invention provides a screw comprising of a head, a shank and a thread helically built on the shank, wherein, on the thread there is even number of axial slots formed. Meanwhile, ~~every~~ each axial slot is beveled with a back angle to form a ~~sheared section~~ tilt surface from the upper ~~flight flank~~ to the low flight flank to form a cutting edge. As tapping the screw, the cutting lips ~~edges~~ will improve the cutting speed to get rapid fastening with less tapping torque goal.

III. Please replace the paragraph beginning at page 4, lines 5 to 18, with the following amended paragraph:

Referring to Fig. 4 and Fig. 5, the first embodiment of the present invention provides a screw 5 consisted of a head 51, a shank 52 under the head 51 in a whole body, and a thread 53 helically built upon the outside trunk of the shank 52.

Wherein, ~~said~~ the shank 52 has a base circle surface 521 surrounding the axis. The

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-helical thread 53 projects from the base circle surface 521. ~~Said~~ The thread 53 is consisted of an upper ~~flight~~ flank 531, a low ~~flight~~ flank 532, and an ~~peak~~ edge 533 on the joint line of the upper and low ~~flights~~ flank 53 ~~2 1~~ 53 ~~3 2~~, and an even number of axial slots 534 formed on the thread 53 of the shank 52 in equidistance. The feature is that ~~every~~ each axial slot 534 is beveled with a back angle to form a ~~sheared section~~ tilt surface 535 from the upper ~~flight~~ flank 531 to the low ~~flight~~ flank 532, so as to form a cutting edge 536.

IV. Please replace the paragraph beginning at page 4, line 19 to page 5, line 6, with the following amended paragraph:

Referring to Fig. 5 and Fig. 6, when secure the screw 5 on an object 6, the worker should vertically press the screw 5 on the surface of the object 6 with the bottom end, and continuously exert tapping forcing on the head 51 of the screw 5. Hence the thread 53 is turned simultaneously, in order to tap into the object 6. Along with the implanting of the thread 53, the ~~peak~~ edge 533 of the thread 53 can cut the object 6, and the cutting ~~lips~~ edges 536 consisted of the ~~sheared section~~ tilt surface 535 and the low ~~flights~~ flanks 532 can also cut simultaneously as a hatchet. So that, as screwing the thread 53, the cutting ~~lips~~ edges 536 can circularly cut for rapidly and efficiently shear the interlace and twined wooden fabric, further to reduce the tapping resistance to get rapid fastening effect and to reduce the tapping torque. It is for sure that the uncut wooden fabric by the cutting

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lips edges 536 can be led by the sheared section tilt surface 535 to the rear cutting edge for cutting through.

V. Please replace the paragraph beginning at page 5, lines 10 to 15, with the following amended paragraph:

1. Better fastening effect: when screw into the object 6 with the screw 5, due to the sheared section tilt surface 535 at the side of the axial slot 534 beveled on the thread 53; the size of the axial slot 534 is expended to increase the space of containing chips for facilitating to cut fluently.

VI. Please replace the paragraph beginning at page 5, lines 16 to 28, with the following amended paragraph:

2. Rapid fastening with smaller tapping torque: as above description, the sheared section tilt surface 535 beveled on the thread 53 at the side of the axial slot 534 cooperates to the low flight flank 532 to form a cutting lip edge 536 as sharp as a hatchet. Thus, as fastening the thread 53, not only take the original peak edge 533 to cut, but also the cutting lip edge 536 is to shear the wooden fabric firstly to efficiently cut through the interlace and twined wooden fabric. It is sure that the uncut wooden fabric by the cutting lips edges 536 can be led by the sheared section tilt surface 535 to the rear cutting edge for cutting through. Therefore it is helpful to reduce command of tapping torque as screwing the screw 5 for

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preventing the screw 5 from breaking up.

VII. Please replace the paragraph beginning at page 6, lines 1 to 9, with the following amended paragraph:

According to the above description, the main feature of the present invention is to bevel a ~~sheared section~~ tilt surface on the thread at the side of the axial slot, and ~~said sheared section~~ the tilt surface cooperates with the low ~~flight~~ flank to form a cutting ~~lip~~ edge to help the thread do rapid cutting to screw in the object. Meanwhile, during the screw tapping in process, the chips produced can be also removed and contained immediately. To get rapid fastening with smaller tapping torque.

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